

The inventive mechanism uses several sub-systems to generate outputs from the stereo input signal. A first sub-system synthesizes the phantom center output, which places the monaural center image between the left and right speakers in front of the listener. A second sub-system synthesizes the virtual surround (or rear) output signals, which places the sound images to the sides of the listener. A third sub-system synthesizes the left and right stereo outputs, and expands the locations of the left and right sound images.